U.S. Department of the Interior
Bureau of Land Management
Little Snake Field Office
455 Emerson Street
Craig, CO 81625-1129

ENVIRONMENTAL ASSESSMENT

EA-NUMBER: CO-100-2006-014 EA

CASEFILE/PROJECT NUMBER/LEASE NUMBER: COC49460

PROJECT NAME: F Wilson Well #33

LEGAL DESCRIPTION: NENE Section 22, T12N, R100W, 6th PM, Moffat County, Colorado

APPLICANT: Wexpro Company

PLAN CONFORMANCE REVIEW: The proposed action is subject to the following plan:

> Name of Plans: Little Snake Resource Management Plan and Record of Decision (ROD) approved on April 26, 1989; and the Colorado Oil and Gas Leasing & Development Environmental Impact Statement (EIS) and the ROD signed on November 5, 1991.
>
> Remarks: The F Wilson Well #33 would be located within Management Unit 2 (Little Snake Resource Management Plan). One of the objectives of Management Unit 2 is to provide for the development of the oil and gas resource. The development of other resource uses/values within this unit is allowed consistent with the management objectives for oil, gas, and forest resources.

The proposed action has been reviewed for conformance with this plan (43 CFR 1610.5, BLM 1617.3). The proposed action is in conformance with the objectives for this management unit.

NEED FOR PROPOSED ACTION: To provide for the development of oil and gas resources and to supply energy resources to the American public.

PUBLIC SCOPING PROCESS: The Notice of Staking is posted in the Little Snake Field Office for a minimum of 30 days before the Application for Permit to Drill is approved and issued to the applicant.

DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES: The proposed action is to approve one Application for Permit to Drill (APD) submitted by Wexpro Company. Wexpro

Company proposes to drill one gas well on BLM administered land located in the Hiawatha Field in NENE Sec. 22, T12N, R100W. An APD has been filed with the LSFO for F Wilson Well #33. The APD includes drilling and surface use plans that cover mitigation of impacts to vegetation, soil, surface water, and other resources. Mitigation not incorporated by Wexpro Company in the drilling and surface use plans would be attached by the BLM as Conditions of Approval to an approved APD.

The proposed well is located approximately 65 miles southeast of Rock Springs, Wyoming. Construction work is planned to start during spring of 2006 and the estimated duration of construction and drilling for the well is 45 days. A short access road of approximately 180 feet would be constructed to access the well. Total surface disturbance for road construction would be approximately one-half acre. All road construction would be on lease and on BLM surface and would not require a federal Right-of-Way.

The proposed well pad would be cleared of all vegetation and leveled for drilling. Topsoil and native vegetation would be stockpiled for use in reclamation. Approximately 3.0 acres would be disturbed for construction of the well pad. This would include the 400' by 295' well pad, the topsoil, and subsoil piles. A reserve pit would be constructed on the well pad to hold drill mud and cuttings. If the well is a producer, cut portions of the well site would be backfilled and unused portions of the well site would be stabilized and re-vegetated. If the gas well proves unproductive, it would be properly plugged and the entire well pad and access road would be reclaimed.

Wexpro Company did include plans for a gas sales pipeline with the APD. Approximately 299 feet of new pipeline would be installed and connected to existing gas pipelines in the Hiawatha Field to service the well once production is established. All pipeline construction would be on lease and on BLM surface.

NO ACTION ALTERNATIVE: The "no action" alternative is that the well would not be permitted and therefore no well would be drilled. Wexpro Company holds a valid and current oil and gas lease for the area where the proposed F Wilson Well #33 would be located. Under leasing contracts, the BLM has an obligation to allow mineral development if the environmental consequences are not irreversible or too severe. The APD process is designed to overcome the no action situation of not accepting the APD through the mitigation of predicted environmental consequences. Since the proposed action is consistent with the ROD and the Oil and Gas Leasing EIS, rejecting the APD for the well was considered but will not be analyzed further in this EA.

AFFECTED ENVIRONMENT/ENVIRONMENTAL CONSEQUENCES/MITIGATION MEASURES

CRITICAL RESOURCES

AIR QUALITY

Affected Environment: There are no special designation air sheds or non-attainment areas nearby that would be affected by the proposed action.

Environmental Consequences: Short term, local impacts to air quality from dust would result during and after well pad construction. Drilling operations produce air emissions such as exhaust from diesel engines that power drilling equipment. Air pollutants could include nitrogen oxides, particulates, ozone, volatile organic compounds, fugitive natural gas, and carbon monoxide. Gas flaring reduces the health and safety risks in the vicinity of the well by burning combustible and poisonous gases like methane and hydrogen sulfide. The proposed action will not adversely affect the regional air quality.

Mitigative Measures: None

Name of specialist and date: Barb Blackstun 01/12/06

AREA OF CRITICAL ENVIRONMENTAL CONCERN

Affected Environment: Not present.

Environmental Consequences: Not applicable.

Mitigative Measures: Not applicable

Name of specialist and date: Jim McBrayer 01/24/06

CULTURAL RESOURCES

Affected Environment: Cultural resources, in this region of Colorado, range from late Paleo-Indian to Historic. For a general understanding of the cultural resources in this area of Colorado, see An Overview of Prehistoric Cultural Resources, Little Snake Resource Area, Northwestern Colorado, Bureau of Land Management Colorado, Cultural Resources Series, Number 20, An Isolated Empire, A History of Northwestern Colorado, Bureau of Land Management Colorado, Cultural Resource Series, Number 2, and Colorado Prehistory: A Context for the Northern Colorado River Basin, Colorado Council of Professional Archaeologists.

Environmental Consequences: The proposed project, Wexpro and Questar Gas Management F. Wilson #33 well pad and access and pipeline, has undergone a Class III cultural resource survey:

Pastor Jana V.
2005 Letter: Documentation for a Class III exclusion for the proposed Wexpro F. Wilson #33 well pad and access road (05-WAS-1055; BLM 12.8.06). Western Archaeological Services, Inc., Rock Springs, Wyoming.

Pastor Jana V.
2005 Letter: Documentation for a Class III exclusion for the proposed Questar F. Wilson #33 pipeline, (05-WAS-1056; BLM 12.9.06). Western Archaeological Services, Inc., Rock Springs, Wyoming.

The proposed projects are with in a Class III block survey completed in 1988. The projects are not in conflict with any recorded sites identified in that effort. The proposed project may proceed as described in this EA with the following mitigative measures in place.

Mitigative Measures: Project specific mitigation, eligible and need data cultural resources within the block survey are to be avoided by this project.

The following standard stipulations apply for this project:

1. The operator is responsible for informing all persons who are associated with the operations that they will be subject to prosecution for knowingly disturbing historic or archaeological sites, or for collecting artifacts. If historic or archaeological materials are encountered or uncovered during any project activities, the operator is to immediately stop activities in the immediate vicinity of the find and immediately contact the authorized officer (AO) at (970) 826-5000. Within five working days, the AO will inform the operator as to:

- Whether the materials appear eligible for the National Register of Historic Places;
- The mitigation measures the operator will likely have to undertake before the identified area can be used for project activities again; and
- Pursuant to 43 CFR 10.4(g) (Federal Register Notice, Monday, December 4, 1995, Vol. 60, No. 232) the holder of this authorization must notify the AO, by telephone at (970) 826-5000, and with written confirmation, immediately upon the discovery of human remains, funerary items, sacred objects, or objects of cultural patrimony. Further, pursuant to 43 CFR 10.4(c) and (d), you must stop activities in the vicinity of the discovery and protect it for 30 days or until notified to proceed by the authorized officer.

2. If the operator wishes, at any time, to relocate activities to avoid the expense of mitigation and/or the delays associated with this process, the AO will assume responsibility for whatever recordation and stabilization of the exposed materials may be required.

Otherwise, the operator will be responsible for mitigation costs. The AO will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the AO that the required mitigation has been completed, the operator will then be allowed to resume construction.

Name of specialist and date: Henry S. Keesling 01/13/06

ENVIRONMENTAL JUSTICE

Affected Environment: There will be no impact to minority or low-income populations.

Environmental Consequences: None.

Mitigative Measures: None.

Name of specialist and date: Phillis A. Bowers 01/13/06

FLOOD PLAINS

Affected Environment: Active floodplains and flood prone zones are avoided.

Environmental Consequences: No threat to human safety, life, welfare, or property will result from the proposed action.

Mitigative Measures: None

Name of specialist and date: Barb Blackstun 01/12/06

INVASIVE, NONNATIVE SPECIES

Affected Environment: Halogeton (Halogeton glomeratus) and cheatgrass (Bromus tectorum) are known to occur along roadsides, well pads, pipelines and other disturbed areas. Given an opportunity, both these species are capable of out competing native vegetation communities, and becoming the dominant cover type without management. Several biennial thistles are known to occur in this area given wet enough conditions. The potential for other noxious weeds to occur exists given favorable climatic and growing conditions.

Environmental Consequences: The surface disturbing activities and associated traffic involved with drilling a new well and constructing the necessary access road will create a favorable environment, and provide a mode of transport for invasive species and other noxious weeds to become established. Invasive species can be spread through a variety of means including vehicular travel, wind, water, and wildlife and livestock movement. Required mitigation attached as Conditions of Approval to minimize disturbance, and the utilization of interim reclamation techniques would facilitate control of invasive species and

reduce the potential of long term infestation of annual and noxious weed species. All principles of Integrated Pest Management should be employed to control noxious weeds on public lands.

Mitigative Measures: None

Name of specialist and date: Curtis Bryan 01/23/06

MIGRATORY BIRDS

Affected Environment: Sagebrush stands in the project area provide foraging and nesting habitat for a variety of migratory birds. Two sagebrush obligate species listed on USFWS's Bird of Conservation Concern List, the sage sparrow and the Brewer's sparrow likely nest in the area. Additional birds that may nest in the area include the vesper sparrow and sage thrasher. There are no raptor nests located in the vicinity of the proposed well site.

Environmental Consequences: The proposed action has a low potential to result in the take of any migratory bird species. Nesting of migratory birds may be disrupted and nests could be lost if construction activities are conducted during the nesting period (May – July). As this would only impact approximately 3.5 acres of sagebrush habitat, the potential of take would remain low. Disturbing 3.5 acres of nesting habitat should not significantly impact migratory birds, however, increased fragmentation of habitat from oil and gas development may decrease the suitability of the habitat for some species. Well pads, roads, and pipelines increase habitat fragmentation and decrease habitat patch size. Ingelfinger (2001) found that roads associated with oil and gas development have a negative impact on passerines bird species. Bird densities were reduced within 100m of each road. Due to the amount of development in Hiawatha, including new road construction and an increase in traffic on these roads, passerine populations in the area are likely decreasing.

References:

Ingelfinger, F. 2001. The Effects of Natural Gas Development on Sagebrush Steppe Passerines in Sublette County, Wyoming. University of Wyoming, Laramie, WY

Mitigative Measures: None

Name of specialist and date: Desa Ausmus 01/13/06

NATIVE AMERICAN RELIGIOUS CONCERNS

A letter was sent to the Uinta and Ouray Tribal Council, Southern Ute Tribal Council, Ute Mountain Ute Tribal Council, and the Colorado Commission of Indian Affairs on January 21, 1999. The letter listed the projects that the BLM would notify them on and projects that would not require notification. No comments were received (Letter on file at the Little Snake Field Office). This project requires no additional notification.

Name of specialist and date: Henry S. Keesling 01/13/06

PRIME & UNIQUE FARMLANDS

Affected Environment: Not Present

Environmental Consequences: None

Mitigative Measures: None

Name of specialist and date: Barb Blackstun 01/12/06

T&E SPECIES – ANIMALS

Affected Environment: The Hiawatha area does not provide habitat for any federally listed threatened or endangered wildlife species. The project area provides habitat for greater sage grouse, a BLM sensitive species. The proposed well site, road and pipeline fall within CDOW mapped winter and overall habitat for sage grouse.

Environmental Consequences: No Federally ESA listed animal species would be affected by the proposed action. Although the F. Wilson #33 well is located in mapped winter range, sagebrush stands at the well site did not meet characteristics of quality winter habitat for sage grouse. Shrub vegetation at the site was too sparse and sagebrush patch size was too small to provide suitable winter habitat for sage grouse. The project area does provide some habitat for grouse during non-critical times of the year or when moving to and from winter or nesting habitat. Some impacts to sage grouse would still be expected from this project, mostly from indirect impacts to habitat or displacement during drilling and construction activities. The proposed wells will eliminate approximately 3.5 acres of sage grouse habitat. Individual well pad construction would not have significant negative impacts on sage grouse habitat, however, the cumulative impacts of a new well, the associated road and pipeline and the amount of gas development already existing in the area, will continue to degrade grouse habitat. Oil and gas development may lead to decreased sage grouse use of the Hiawatha area.

Mitigative Measures: None

Name of specialist and date: Desa Ausmus 01/13/06

T&E SPECIES – PLANTS

Affected Environment: There are no federally listed threatened or endangered plant species within or in the vicinity of the Proposed Action.

Environmental Consequences: None

Mitigative Measures: None

Name of specialist and date: Hunter Seim 01/17/06

T&E SPECIES - SENSITIVE PLANTS

Affected Environment: There are no BLM sensitive plant species within or in the vicinity of the Proposed Action.

Environmental Consequences: None

Mitigative Measures: None

Name of specialist and date: Hunter Seim 01/17/06

WASTES, HAZARDOUS OR SOLID

Affected Environment: If a release does occur, the environment affected would be dependent on the nature and volume of material released. If there are no releases, there will be no impact on the environment.

Environmental Consequences: Consequences will be dependent on the volume and nature of the material released. In most every situation involving hazardous materials, there are ways to remediate the area that has been contaminated. Short-term consequences will occur, but they can be remedied, and long-term impacts will be minimal.

Mitigative Measures: None

Name of specialist and date: Duane Johnson 01/12/06

WATER QUALITY – GROUND

Affected Environment: Fresh water within the Wasatch Formation may occur. Water within the Wasatch Formation in existing wells within T.12N., R.100W., sections 22 and 23 ranges from 1,402 ppm TDS to 30,599 ppm TDS. Potable water is highly unlikely in this area. The surface casing will be adequate to protect any fresh water zones, coupled with production casing and cement behind pipe from TD to surface.

Environmental Consequences: With the use of proper construction practices, drilling practices, and with best management practices no significant adverse impact to groundwater aquifers and quality is anticipated to result from the proposed action. A geologic and engineering review was performed on the 8-point drilling plan to ensure that the cementing and casing program adequately protects the downhole resources.

Mitigative Measures: None

Name of specialist and date: Fred Conrath 01/19/06

WATER QUALITY/HYDROLOGY – SURFACE

Affected Environment: No springs would be affected by the well project. Runoff water from the well location would ultimately reach Vermillion Creek. The F Wilson Well #33 would be located on a plateau and runoff water would flow through ephemeral drainages towards Vermillion Creek. Vermillion Creek within the affected environment must have water quality sufficient to support Aquatic Life Warm 2, Recreation 1b (June 1 through August 31), Recreation 2 (September 1 through May 31) and Agriculture.

Environmental Consequences: The well location would require the construction of one short access road and pipeline. The proponent has incorporated water turnout ditches on the crowned and ditched access road to manage runoff water and to reduce water erosion. Construction of the road, well pad, pipeline, and installation of the specific drainage features should follow the recommendations provided in the Surface Operating Standards for Oil and Gas Development, 3rd Edition.

Increased sedimentation to Vermillion Creek during spring runoff or from high intensity summer/fall rainstorms would be the greatest potential impact to water quality. Although some sediment may be transported off site and eventually reach perennial waters, the mitigation provided in the Surface Use Plan and the Conditions of Approval will reduce the potential impacts caused by surface runoff.

Mitigative Measures: None

Name of specialist and date: Barb Blackstun 01/12/06

WETLANDS/RIPARIAN ZONES

Affected Environment: No wetlands or riparian zones exist in the project area.

Environmental Consequences: None

Mitigative Measures: None

Name of specialist and date: Desa Ausmus 01/13/06

WILD & SCENIC RIVERS

Affected Environment: Not present.

Environmental Consequences: Not applicable.

Mitigative Measures: Not applicable

Name of specialist and date: Jim McBrayer 01/24/06

WILDERNESS, WSAs

Affected Environment: Not present.

Environmental Consequences: Not applicable.

Mitigative Measures: Not applicable

Name of specialist and date: Jim McBrayer 01/24/06

NON-CRITICAL ELEMENTS

FLUID MINERALS

Affected Environment: The proposed action is in favorability zone 4 (highest for oil and gas potential). This well will penetrate the Wasatch, Fort Union, Lance, Lewis Shale, and Mesaverde Formations. Bituminous coal seams with more than three thousand feet of overburden can be found throughout the Mesaverde (Almond) and Ft. Union Formations, and in a lesser amount the Lance Formation. Shallower thin beds of bituminous coal can be found in the Wasatch Formation as well. There mineable value is low, but they may be valuable coal bed methane reservoirs and must be protected or isolated where encountered. It should be noted that the hydrology for coal bed methane production within the Sand Wash geologic basin is unfavorable even though the gas resource is large (Scott, et al., 1995). The Mesaverde (Almond) in this area is mainly coastal swamp and lagoon deposits with two transgressive shoreline deposits pinching out in a northwesterly direction near the top of the formation. Coal beds are non existent in this area within the Ericson Formation. The top third (Canyon Creek Member) and bottom third (Trail Creek Member) of the Ericson Sandstone are coastal-plain fluvial deposits of crossbedded sandstones.

Environmental Consequences: The proposed casing and cementing program appears to be adequate to protect and/or isolate all resources identified above with casing and cement behind pipe from TD to the surface.

Mitigative Measures: None

Name of specialist and date: Fred Conrath 01/19/06

PALEONTOLOGY

Affected Environment: The geologic formation at the surface is the Tertiary Age formation, Green River Formation, Luman Tongue unit (Tglu). This formation is a moderately resistant, light- to medium brown fissile oil shale, siltstone, sandstone, limestone, carbonaceous shale, coal, and conglomerate. Tglu is mapped in the Vermillion Creek area. Thickness is 100-150 meters. This formation has been classified a Class II formation for the potential for occurrence of scientifically significant fossils. Scientifically significant fossils are occasionally found within this formation (Armstrong & Wolney, 1989). The potential for discovery of significant fossils on this location is considered to be moderate.

Environmental Consequences: If any such fossils are located here, construction activities could damage the fossils and the information that could have been gained from them would be lost. The significance of this impact would depend upon the significance of the fossil. This impact can be effectively mitigated by ceasing operations and notifying the Field Office Manager immediately upon discovery of a fossil during construction activities. An assessment of the significance is made and a plan to retrieve the fossil or the information from the fossil is developed.

The proposed action could also constitute a beneficial impact to paleontological resources by increasing the chances for discovery of scientifically significant fossils.

Mitigative Measures: "Standard Discovery Stip", i.e., “If fossils are discovered during construction or other operations, all activity in the area will cease and the Field Office Manager will be notified immediately. An assessment of significance will be made within an agreed time frame. Operations will resume only upon written notification by the Authorized Officer."

References

Armstrong, Harley J. and Wolney, David G., 1989, Paleontological Resources of Northwest Colorado: A Regional Analysis, Museum of Western Colorado, Grand Junction, CO, prepared for Bur. Land Management, Vol. I of V.

Miller, A.E., 1977, Geology of Moffat County, Colorado, Colo. Geol. Surv. Map Series 3, 1:126,720.

Name of specialist and date: Robert Ernst 01/13/06

SOILS

Affected Environment: The F Wilson Well #33 is staked on very level ground. The proposed well is found within the Boltus-Beamton complex soil mapping unit. Slopes within this unit average 2 to 12 percent. The soils are derived from shale, very shallow and

well drained. Effective rooting depth is 10 to 20 inches. The runoff class is very high and the hazard of water erosion is moderate.

Environmental Consequences: Increased soil erosion from wind and water would occur during construction of the well pad, pipeline, and access road. Erosion would continue throughout the operational life of the well. Loss of topsoil, soil compaction, and possible increases in sediment loads to drainages and creeks are impacts most likely to occur. Soil erosion would be reduced by mitigation described in the Surface Use Plan and Conditions of Approval in the approved APD. Additional mitigative measures would be employed to prevent or reduce accelerated erosion if it begins to occur within or on constructed drainage and diversion ditches, surface drainages affected by the road or well pad, and well pad embankments.

Mitigative Measures: None

Name of specialist and date: Barb Blackstun 01/19/06

VEGETATION

Affected Environment: The Proposed Action is located in a sagebrush-grass/salt desert plant community. Dominant species present include Wyoming big sagebrush (Artemesia tridentata wyomingensis), Nuttall's saltbush (Atriplex nuttallii), green rabbitbrush (Chysothamnus vicidiflorus), winterfat (Euphorbia lanata), Hood's phlox (Phlox hoodii), Indian ricegrass (Oryzopsis hymenoides), squirreltail (Sitanion hystrix), and Sandberg bluegrass (Poa sandbergii). Sagebrush is present in dense patches of decadent plants and Nuttall's saltbush is very abundant outside of sagebrush patches. Halogeton (Halogeton glomeratus) and flixweed (Descurania sophia) are two exotic, invasive annuals that are present in relatively high abundance.

Environmental Consequences: The Proposed Action would completely remove approximately 3.5 acres of native vegetation. This removal would be insignificant in the larger landscape but would be in addition to 46 other well sites and approximately 6 miles of roads within a one-mile radius of the Proposed Action. As long as reseeding and subsequent reestablishment of recommended native plants occurs upon well completion, the Proposed Action would not adversely affect the surrounding plant community. As evidenced by the plant community in its pre-disturbance state, this site is highly susceptible to halogeton invasion. It will be imperative that all COAs regarding weed control and revegetation are followed to avoid increasing halogeton presence on and in areas surrounding the Proposed Action.

The No Action Alternative would not impact the native plant community as no disturbance would occur.

Mitigative Measures: None

Name of specialist and date: Hunter Seim 01/17/06

WILDLIFE, AQUATIC

Affected Environment: No aquatic wildlife or habitat for aquatic wildlife exists in the project area.

Environmental Consequences: None

Mitigative Measures: None

Name of specialist and date: Desa Ausmus 01/13/06

WILDLIFE, TERRESTRIAL

Affected Environment: The project area provides habitat for mule deer and pronghorn antelope year round. The proposed well site is located on a historic white-tailed prairie dog town. The project area also provides habitat for small mammals, birds and reptiles.

Environmental Consequences: Impacts to wildlife species from oil and gas development are discussed in the Colorado Oil and Gas EIS (1991). Impacts include, but are not limited to, displacement into less suitable habitat, increased stress and loss of habitat. These impacts are more significant during critical seasons, such as winter or reproduction. The proposed action is located in marginal habitat for most species, and therefore, it is unlikely the project would have significant impacts to wildlife species. All wildlife species using the area are likely to be displaced during construction and drilling activities and may find the project area less suitable once construction is complete.

Most small mammals using the project area would be capable of avoiding construction equipment and should not be directly harmed by these activities. Some burrowing animals may be killed by construction equipment. This should be considered a short-term negative impact that is not likely to harm populations of any species.

Although many of the prairie dog colonies in Hiawatha are beginning to recover from a sylvatic plague epidemic in the early 1990s, no active prairie dog burrows were found in the project area. New road construction provides a corridor for prairie dog movement, increasing the likelihood that inactive towns would be re-colonized in the future. If these prairie dog towns are re-colonized in the future, well pad construction and the associated road and pipeline, would not significantly alter prairie dog complexes.

Mitigative Measures: None

Name of specialist and date: Desa Ausmus 01/13/06

OTHER NON-CRITICAL ELEMENTS: For the following elements, those brought forward for analysis will be formatted as shown above.

Non-Critical Element	NA or Not Present	Applicable or Present, No Impact	Applicable & Present and Brought Forward for Analysis
Fluid Minerals			See Fluid Minerals
Forest Management		MME 01/18/06	
Hydrology/Ground		FC 01/19/06	
Hydrology/Surface		BB 01/12/06	
Paleontology			See Paleontology
Range Management		JHS 01/17/06	
Realty Authorizations		PB 01/13/06	
Recreation/Travel Mgmt		RS 01/24/06	
Socio-Economics		PB 01/13/06	
Solid Minerals		RE 01/13/06	
Visual Resources		JM 01/24/06	
Wild Horse & Burro Mgmt	VMD 12/27/05		

CUMULATIVE IMPACTS SUMMARY: Cumulative impacts may result from the development of the F Wilson Well #33 when added to non-project impacts that result from past, present, and reasonably foreseeable future actions. The potential exists for future oil and gas development throughout the Hiawatha Field. Currently numerous producing wells exist within a one-mile radius of the proposed wells. Other past or existing actions near the project area that have influence on the landscape are wildfire, recreation, hunting, grazing, and ranching activities.

Surface disturbance associated with oil and gas activity would increase the potential for erosion and sedimentation. Only a small reduction in available forage would be anticipated. Some wildlife species may be temporarily displaced by construction at the well site, access road, and future pipeline routes, but should return once construction is completed. Displacement of hunters and recreationists during the short-term construction and drilling periods would occur. Contrasts in line, form, color, and texture from development would impact the visual qualities on the landscape.

Over the last 20 years there has been a slow but steady increase in oil and gas production facilities within and adjacent to Vermillion Creek. Cultural resource surveys in the area have identified several prehistoric cultural resources. These resources were at one time further away from the industry activity. Now they are in close proximity to these facilities. As the Hiawatha Field is in-filled, with more pipeline, compressors, access roads, and pads being constructed, a real potential for impacts to known and yet to be recorded cultural resources is present.

Cumulative impacts to the plant communities within the gas lease and adjacent areas include an incremental reduction of continuity in the plant communities in terms of acreages that remain undisturbed. Loss of continuity results in smaller and smaller areas of undisturbed native

vegetation and the potential for loss of integrity within the larger plant community. Fragmented plant communities can lose resilience to natural and man-made disturbance due to isolation of areas from seed sources necessary for proper age class distribution of plants, and subsequently, a greater opportunity for stressors such as drought to have a more severe impact on the plant community as a whole. The increased disturbance also makes native plant communities more susceptible to invasion by annual weeds as vectors for weeds increase. Even with weed control measures applied, the potential for weeds to move further into undisturbed remnant areas increases as these remnants become smaller and more isolated from larger undisturbed areas.

Cumulative impacts to the livestock grazing operations in the area are also increased through the Proposed Action. The grazing allotment in which these wells are proposed is primarily a winter sheep allotment. The growth in wells, roads, and human activity has reduced the availability of forage in this area far beyond direct impacts caused by construction. Constant truck traffic and decreases in the size of undisturbed areas have resulted in the Canyon Creek/G Wash area becoming largely unavailable for sheep use. Halogeton which has increased among the new roads and well pads is toxic to sheep. The resulting impact to grazing activities permitted in the area is a loss of available Animal Unit Months (AUMs), i.e. a loss of the amount of livestock that the allotment can reasonably carry. Due to recent years of drought, the livestock operator has only lightly used this allotment, so direct impacts to grazing activities have not been fully felt. However, as precipitation patterns improve, there will be a likely significant decrease in the amount of livestock that can be permitted on the allotment. Utilization and production monitoring of unaffected areas remaining in the allotment would be necessary to determine a proper stocking rate after accounting for the loss of available forage from gas development (both direct and indirect) if improving precipitation patterns result in better forage conditions throughout the allotment.

Vermillion Creek and the surrounding areas have experienced an increase in oil and gas development in recent years. Over 35 miles of roads connect numerous wells in the Colorado portion of T12N, R101W. Little development exists west of Canyon Creek; however, there are 61 producing and 28 abandoned but unreclaimed wells east of the project area in T12N, R100W. Pad construction and the associated infrastructure of roads lead to fragmentation of habitat for wildlife species. As this area is developed, it can be expected that wildlife use of the area would decrease due to habitat fragmentation and decrease in security.

Many historic raptor nests associated with Vermillion Creek and Canyon Creek have not been active for the past several years. Oil and gas development may have made this area less suitable for these species by increasing disturbance, decreasing nest security and removing habitat for prey species. It is probable that raptors have moved away from developing areas to nest. As oil and gas development moves along the creek, it may disturb any new nests. Eventually, some raptors may be able to habituate to the increased disturbances. Habitat fragmentation from well pad construction and the associated roads have likely decreased the nesting suitability for other migratory birds. Ingelfinger (2001) found that roads associated with oil and gas development have a negative impact on passerines bird species. Bird densities were reduced within 100m of each road. Due to the amount of new road construction and an increase in traffic on these roads, passerine populations in the area are likely decreasing.

Even with the amount of activity in the area, it is unlikely that oil and gas development would have significant impacts to white-tailed prairie dogs. Many of the prairie dog colonies have died out, likely due to a plague epidemic. New road construction provides a corridor for prairie dog movement, increasing the likelihood that inactive towns would be re-colonized in the future. Fragmentation of habitat does not seem to impact prairie dogs as severe as other species, providing that suitable forage remains.

The cumulative impacts of one new well, the associated road and the amount of gas development already existing in the area, will continue to degrade habitat for the greater sage grouse. Although there are no leks located near the F Wilson Well #33, the project area does provide nesting and brood rearing habitat for sage grouse. Fragmentation, mostly due to road construction, is an important factor contributing to a decrease in habitat quality. Oil and gas development combined with sagebrush die-offs may lead to decreased sage grouse use of the habitat.

Although big game species are able to adapt to disturbances better than other wildlife, increased development may still have some impacts to mule deer, antelope, and elk. Timing stipulations adequately protect big game species during critical times of the year. An increase in vehicle traffic will occur as the Hiawatha Field is developed. A significant impact to big game may be vehicle-animal collisions, as these are a major cause of mortality for big game species.

The cumulative effects of projected oil and gas development are minimized through Best Management Practices identified in the Surface Use Plan of the APD and the BLM required mitigation in the Conditions of Approval for the APD. Proper construction and drilling practices must comply with federal and state environmental regulations. All oil and gas wells in the area would be completed in accordance with Onshore Order No. 2. Reasonably foreseeable mineral development would occur under the guidelines of the Little Snake Resource Management Plan and the Colorado Oil and Gas Leasing and Development EIS.
References:

Ingelfinger, F. 2001. The Effects of Natural Gas Development on Sagebrush Steppe Passerines in Sublette County, Wyoming. University of Wyoming, Laramie, WY.

STANDARDS:

PLANT AND ANIMAL COMMUNITY (animal) STANDARD: The project area provides habitat for a variety of wildlife species. The proposed action would increase fragmentation of sagebrush stands, degrading wildlife habitat. The proposed action would not meet this standard within a one mile radius of the proposed action due to the amount of oil and gas development in the area. However, the proposed action would not preclude this standard from being met on a landscape level.

Name of specialist and date: Desa Ausmus 01/13/06

SPECIAL STATUS, THREATENED AND ENDANGERED SPECIES (animal)
STANDARD: The project area provides habitat for greater sage grouse, a BLM sensitive species. The proposed action would increase fragmentation of sagebrush stands, degrading sage grouse habitat. The proposed action would not meet this standard within a one mile radius of the proposed action due to the amount of oil and gas development in the area. However, the proposed action would not preclude this standard from being met on a landscape level.

Name of specialist and date: Desa Ausmus 01/13/06

PLANT AND ANIMAL COMMUNITY (plant) STANDARD: The Proposed Action would completely remove native vegetation. As long as the COAs concerning revegetation and weed control are faithfully adhered to, the native plant community would eventually return and weeds such as halogeton would be kept in check, and thus meet this standard. The No Action Alternative would meet this standard as no disturbance would occur.

Name of specialist and date: Hunter Seim 01/17/06

SPECIAL STATUS, THREATENED AND ENDANGERED SPECIES (plant)
STANDARD: There are no federally listed threatened or endangered or BLM sensitive plant species within or in the vicinity of the Proposed Action. This standard does not apply.

Name of specialist and date: Hunter Seim 01/17/06

RIPARIAN SYSTEMS STANDARD: The riparian standard for healthy public lands will not be affected by the proposed action.

Name of specialist and date: Desa Ausmus 01/13/06

WATER QUALITY STANDARD: The proposed action would meet the public land health standard for water quality. Interim reclamation of the unused area on the well pad will be completed to minimize sheet and rill erosion from the well sites. When the well pad is no longer needed for production operations, the disturbed area would be reclaimed to approximate original contours, topsoil would be redistributed, and adapted plant species would be reseeded. These Best Management Practices would help to reduce accelerated erosion of the site. No stream segments near this project are listed as impaired.

Name of specialist and date: Barb Blackstun 01/12/06

UPLAND SOILS STANDARD: The proposed action will not meet the upland soil standard for land health, but it is not expected to while the well location and access road are used for operations. The drilling and production site, pipeline, and access road will not exhibit the characteristics of a healthy soil. Several Best Management Practices have been designed into the project or are attached as mitigating measures that will reduce impacts to and conserve soil materials. The pipeline corridors will exhibit unhealthy upland soil characteristics initially, but

within one to two years following reclamation the soil health will be moving toward the upland soil standard. Upland soil health will return to the well pad and access road disturbances after well abandonment and reclamation practices have been successfully achieved.

Name of specialist and date: Barb Blackstun 01/12/06

PERSONS/AGENCIES CONSULTED: Uintah and Ouray Tribal Council, Colorado Native American Commission, Colorado State Historic Preservation Office.

FINDING OF NO SIGNIFICANT IMPACT (FONSI)
EA CO-100-2006-014

Based on the analysis of potential environmental impacts contained in the EA and all other available information, I have determined that the proposal and the alternatives analyzed do not constitute a major Federal action that would adversely impact the quality of the human environment. Therefore, an EIS is unnecessary and will not be prepared. This determination is based on the following factors:

1. Beneficial, adverse, direct, indirect, and cumulative environmental impacts have been disclosed in the EA. Analysis indicated no significant impacts on society as a whole, the affected region, the affected interests, or the locality. The physical and biological effects are limited to the Little Snake Resource Area and adjacent land.

2. Public health and safety would not be adversely impacted. There are no known or anticipated concerns with project waste or hazardous materials.

3. There would be no adverse impacts to regional or local air quality, prime or unique farmlands, known paleontological resources on public land within the area, wetlands, floodplain, areas with unique characteristics, ecologically critical areas, or designated Areas of Critical Environmental Concern.

4. There are no highly controversial effects on the environment.

5. There are no effects that are highly uncertain or involve unique or unknown risk. Sufficient information on risk is available based on information in the EA and other past actions of a similar nature.

6. This alternative does not set a precedent for other actions that may be implemented in the future to meet the goals and objectives of adopted Federal, State, or local natural resource related plans, policies, or programs.

7. No cumulative impacts related to other actions that would have a significant adverse impact were identified or are anticipated.

8. Based on previous and ongoing cultural surveys, and through mitigation by avoidance, no adverse impacts to cultural resources were identified or anticipated. There are no known American Indian religious concerns or persons or groups who might be disproportionately and adversely affected as anticipated by the Environmental Justice Policy.

9. No adverse impacts to any threatened or endangered species or their habitat that was determined to be critical under the Endangered Species Act were identified. If, at a future time, there could be the potential for adverse impacts, treatments would be modified or mitigated not to have an adverse effect or new analysis would be conducted.

10. This alternative is in compliance with relevant Federal, State, and local laws, regulations, and requirements for the protection of the environment.

DECISION AND RATIONALE: I have determined that approving this APD is in conformance with the approved land use plan. It is my decision to implement the project with the mitigation measures provided in the Application for Permit to Drill and the Conditions of Approval. The project will be monitored as stated in the Compliance Plan outlined below.

MITIGATION MEASURES: The mitigation measures for this project are found in the file room of the Little Snake Field Office. The APD's 13-point surface use plan, well location maps, and the Conditions of Approval are found in the well's case file labeled COC49460, Well #33.

COMPLIANCE PLAN(S):

Compliance Schedule
Compliance will be conducted during the construction phase and drilling phase to insure that all terms and conditions specified in the lease and the approved APD are followed. In the event a producing well is established, periodic inspections as identified through the Inspection and Enforcement Strategy and independent well observations will be conducted. File inspections will include a review of all required reports and the Monthly Report of Operations will be evaluated for accuracy.

Monitoring Plan
The well location and access road will be monitored during the term of the lease for compliance with pertinent Regulations, Onshore Orders, Notices to Lessees, or subsequent COAs until final abandonment is granted; monitoring will help determine the effectiveness of mitigation and document the need for additional mitigative measures.

Assignment of Responsibility
Responsibility for implementation of the compliance schedule and monitoring plan will be assigned to the Fluid Mineral staff in the Little Snake Field Office. The primary inspector will be the Petroleum Engineering Technician, but the Petroleum Engineer, Natural Resource Specialist, Realty Specialist, and Legal Instruments Examiner will also be involved.

SIGNATURE OF PREPARER: ***/s/ Barbara S. Blackstun***

DATE SIGNED: ***Feb. 3, 2006***

SIGNATURE OF ENVIRONMENTAL REVIEWER: ***/s/ Duane Johnson***

DATE SIGNED: ***2/3/06***

SIGNATURE OF AUTHORIZED OFFICIAL: ***/s/ Jerome D. Strahan***

DATE SIGNED: ***2/7/06***